

Remarks

Claims 1-9 and 33 are currently pending in this patent application. Claims 10-32 and 34-36 are withdrawn. Claims 1 and 33 are independent. Claims 1 and 33 are currently amended.

The Office Action objects to the drawings because reference numeral “V9” does not appear in the drawings. Applicant has amended the specification by way of replacement paragraphs such that reference numeral “V9” does not appear in the specification, thereby obviating the drawing objection.

Rejection Under 35 U.S.C. 102(b)/103(a)

The Office Action rejects claims 1-5, 8, 9 and 33 under 35 U.S.C. 102(b) as being anticipated by, or in the alternative, under 35 U.S.C. 103(a) as obvious over Ritson et al. U.S. Patent No. 3,913,581 (“Ritson”).

The present invention provides a method and apparatus for supplying a refrigerant fluid to a cooling device, such as a cryosurgical probe, wherein an arrangement of valves controls the supply of fluid to and from the cooling device. Fluid flows in a forward direction through the cooling device for generating cooling by expansion of the fluid in the cooling device, whereas backflushing of the fluid is used to clear contaminants from the inlet side of the cooling device. Referring to FIG. 1, the arrangement of valves comprises four valves V1, V2, V3, V4, wherein valve V1 and/or valve V2 are opened while closing valves V3, V4. In this configuration, the fluid may be backflushed through the orifice 14 by opening the third valve V3 while closing at least the first valve V1. Valve V2 may remain open or closed during backflushing, whereas

valve V4 may remain closed to avoid any pressure loss on the outlet side 12b of the cooling device 12. After backflushing, valve V4 may be opened to vent any residual pressure on the outlet side 12b.

Claims 1 and 33 have been amended to recite that at least three valves are employed to control fluid flow to and from the cooling device. Ritson fails to disclose a valve arrangement having at least three valves. The Office Action states that Ritson teaches an apparatus having valves V3, V4, V5. However, each of these valves is part of a separate embodiment, wherein valve V3 is a three-position valve of the embodiment of FIG. 6, valve V4 is an alternative three-position valve of the embodiment of FIG. 7, and valve V5 is a control valve assembly of FIG. 8 that features a two-valve arrangement including valve 5A and valve 5B. None of these embodiments discloses the use of a valve arrangement featuring at least three valves, as required by claims 1 and 33 as amended.

In view of the above, it is respectfully submitted that claims 1-5, 8, 9 and 33 are not anticipated or rendered obvious by Ritson.

The Office Action also rejects claims 6 and 7 under 35 U.S.C. 103(a) as being unpatentable over Ritson.

Claim 1 has been distinguished from the Ritson reference as set forth hereinabove, and the arguments regarding the patentability of claim 5 over Ritson are hereby repeated.

In view of the above, it is respectfully submitted that claims 1-5, 8, 9 and 33 are not anticipated or rendered obvious by Ritson.

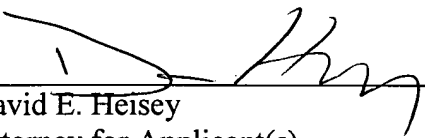
Conclusion

It is believed this amendment now has placed the application in condition for consideration and allowance. If necessary, the Commissioner is hereby authorized in this and concurrent replies to charge payment (or credit any overpayment) to Deposit Account No. 50-0683 in the name of Luce, Forward, Hamilton & Scripps.

Respectfully submitted,

8-1-2005

Date



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